

## FOUR NEW SPECIES OF SAURAUIA FROM SOUTH AMERICA

BY

DJAJA D. SOEJARTO<sup>1</sup>

*Saurauia* is a widespread genus of the Actinidiaceae (Theales). The members of *Saurauia* are represented in both tropical and subtropical Asia and America. According to the latest estimate made by Melchior,<sup>2</sup> approximately 280 species of the genus have been described. The American distribution of *Saurauia* extends from central Mexico in the north to Bolivia in the south, through Andean South America. Twenty-two species are found in Mexico and Central America,<sup>3</sup> and my present study<sup>4</sup> indicates that 49 species are represented in South America. Members of the genus consist mostly of localized populations of mountainous and subalpine trees and shrubs, but species adapted to lower elevations and species with broad geographic distribution are also known.

<sup>1</sup> Latin American Teaching Fellow, Associate Professor, Departamento de Biología, Facultad de Ciencias y Humanidades, Universidad de Antioquia, Medellín, Colombia.

<sup>2</sup> In Engler, *Syllabus der Pflanzenfamilien*, ed. 12, 2: 160. 1964.

<sup>3</sup> Hunter, G.E. 1966. Revision of Mexican and Central American *Saurauia* (Dilleniaceae). *Ann. Missouri Bot. Gard.*, 53 (1): 47-89.

<sup>4</sup> Studies of South American *Saurauia* (Actinidiaceae), 458 pp., 61 pls., Ph.D. dissertation (1968), Department of Biology, Harvard University, Cambridge, Mass., U.S.A.

Among the collections of South American *Saurauia* kindly loaned to me for study by the United States National Museum, the Gray Herbarium of Harvard University and the New York Botanical Garden, there were specimens which I could not identify with any of the species that I accepted from South America nor with any of those of Mexico and Central America accepted by Hunter. After careful studies of these specimens, I am inclined to believe that these species are new to science.

1. *Saurauia multinervis* Soejarto *sp. nov.*

Species foliis magnis elongatis glabris, nervis laterali-  
bus numerosis, inflorescentiis omnino glabris multifloris,  
sepalis glabris notabilibus.—HOLOTYPE: *Idrobo & Fernán-  
ández 54* (US).

Shrubs to 2 m., many-branched, glabrous. Leaf blades elongate-obovate, cuspidate at apex, broadly cuneate to obtuse at base, dentate-serrate with minute and sharp-pointed serrations along margins, 30–42 cm. long, 12–14 cm. wide, coriaceous, dirty dark olive-brown above in dry state, brownish olive beneath, laevigate and smooth above, secondary veins 35–37 pairs, tertiary veins elevated, more prominent than lesser venation, both surfaces glabrous; petioles 1–2 cm. long, 3–5 mm. in diameter, glabrous. Inflorescences straight, ca. 150-flowered, 23 cm. long, 15 cm. wide, glabrous, primary peduncle 1.5 cm. long, bracts linear, to 5 mm. long. Flowers unknown. Fruits laxly distributed, berries 5-locular, globose, to 6 mm. in diameter, 5-sulcate, glabrous; pedicels 4–8 mm. long, bracteoles linear, to 3 mm. long; persistent sepals 5, oblong-elliptic to ovate, obtuse, 5–6.5 mm. long, 3–4.5 mm. wide, all glabrous within and without, marginally entire to irregularly ciliolate; persistent styles 5, 4.5–5 mm. long, stigmas capitate.

*Distribution:* Colombia (Departamento Cauca), alt. 2000 m., fruiting in August.

*Vernacular names:* *Lulumoco* (Cauca—Idrobo & Fernández).

*Specimens examined.* Colombia, Cauca: Cordillera Occidental, vertiente oriental, El Tambo, Corregimiento de Chapa, Ciruelas, *Idrobo & Fernández 54* (US).

## 2. *Saurauia Schultesiana*<sup>5</sup> *Soejarto sp. nov.*

Species ceteribus differt foliis et inflorescentiis ramuli apice confertis, laminis supra distante et sparse setulosis subtus sparse setosis, inflorescentiis paucifloris (minus quam vigintifloribus), bracteis glabris, pedicellis longis (usque ad 10 mm.), floribus magnis (20–25 mm. latis), sepalis parte mediana parse pubescentibus sed lateralibus glabris, intus omnino glabris, staminibus viginti-quinque ad trigintiquinque.—Holotypus: *Pennell 10501* (NY).

Trees: copiously to sparingly pubescent. Branchlets terete, abundantly pulverulent, rusty strigose to appressed-setose (young leaves and shoot deep brown). Leaves crowded near tip of branchlets; blades elliptic to oblong-obovate, acuminate at apex with acumen to 15 mm. long, cuneate at base, serrulate along margins, 14–18 cm. long, 7–8 cm. wide, subcoriaceous, in dry state dark dirty brown above, greyish olive-brown beneath, scarcely scabrous above and beneath, secondary veins 15–18 pairs, tertiary veins elevated, more prominent than lesser venation, sparingly setulose along and between minor veins and abundantly appressed-setose to strigose along major veins above, sparingly setose to setulose (mixed with

<sup>5</sup> I have named this species in honor of Dr. Richard Evans Schultes, Executive Director of the Botanical Museum of Harvard University and my former academic adviser, who has inspired in me a deep interest in the tropical American flora.

scattered radiate trichomes) along and between minor veins and abundantly pulverulent strigose along major veins beneath; petioles ca. 2 cm. long, 2–3 mm. in diameter, half-terete, abundantly rusty strigose. Inflorescences distributed near tip of branchlets, straight, 6–20-flowered, 13–30 cm. long, 2–7 cm. wide, abundantly pulverulent scurvy-strigose, primary peduncle 8–15 cm. long, bracts broadly triangular to suborbicular, 10–15 mm. long, 5–7 mm. wide, glabrous. Flowers 20–25 mm. broad, buds to 9 mm. in diameter, pedicels 5–10 mm. long, bracteoles broadly triangular, to 10 mm. long; sepals 5, outer 2 trullate to oblong-ovate, subacute, 10–12 mm. long, 6–7 mm. wide, imbricate one suborbicular, rounded, 10–12 mm. long, 8–9 mm. wide, inner 2 suborbicular to orbicular-oblong, rounded, 10–14 mm. wide, all glabrous to medially sparingly strigillose without, completely glabrous within, marginally entire to apically ciliolate; petals 5, white, subquadrangular to spatulate, rounded, 15–19 mm. long, 9–11 mm. wide; stamens 25–35, filament 4–5 mm. long, anther 2.5–3 mm. long; ovary 5–7-locular, globose, 5–7-sulcate, glabrous, styles 5–7, to 7.5 mm. long, stigmas capitate. Berries 5–7-locular, globose, to 6 mm. in diameter (immature) 5–7-sulcate.

*Distribution:* Colombia (Departamento Caldas), mossy forest, alt. 3200–3400 m., flowering in September.

*Specimens examined.* Colombia, Caldas: Cordillera Occidental, Cerro Tatamá, *Pennell 10501* (NY).

3. **Saurauia Mexiae**<sup>6</sup> *Killip ex Soejarto sp. nov.*

*S. pseudostrigillosae* Busc. affinis sed floribus grandiori-

<sup>6</sup>Killip annotated the collection (*Mexia 8488*) as *Saurauia Mexiae* Killip spec. nov., but so far as I am aware, the name and description of this concept have never been published.

bus, pedicellis longioribus, foliis subtus abundanter et molliter stellatis differt.—Holotypus: *Mexia 8488* (US).

Trees to 10 m.; copiously pubescent. Branchlets somewhat terete, distinctly scarred, abundantly to sparingly pulverulent strigose. Leaves crowded near tip of branchlets; blades somewhat broadly ovate, abruptly acuminate with acumen to 15 mm. long, obtuse to rounded at base, rarely oblique, serrulate along margins, 17–28 cm. long, 9–15 cm. wide, chartaceous, in dry state dark dirty olive-brown above, grey-green beneath, somewhat scabrous above but somewhat soft beneath, secondary veins 16–22 pairs, tertiary veins elevated, more prominent than lesser venation, strigillose (trichomes with barbules) along veins with pustulate epidermis above, abundantly and softly stellate (trichomes very slender) along and between veins but mixed with unbranched multicellular trichomes along major veins with somewhat pustulate epidermis beneath; petioles 1.5–3 cm. long, 2–3 mm. in diameter, half-terete, densely pulverulent strigillose to strigose. Inflorescences crowded near tip of branchlets, straight, lax and somewhat spreading, ca. 100-flowered, 18–26 cm. long, 10–17 cm. wide, abundantly to densely pulverulent strigose to strigillose (trichomes with barbules), primary peduncle 8–11 cm. long, bracts triangular to linear, to 6 mm. long. Flowers 20–25 mm. broad, buds to 8 mm. in diameter, pedicels 5–12 mm. long, braeteoles minute, subulate, to 2 mm. long; sepals 5, orbicular, rarely oblong, rounded, rarely obtuse, 4–6 mm. long, 4–5 mm. wide, outer 2 abundantly pulverulent-stellate mixed with unbranched multicellular trichomes (with barbules), imbricate one abundantly pulverulent-stellate on outer half, densely pulverulent-stellate on inner half, inner 2 medially abundantly pulverulent-stellate, laterally sparingly pulverulent-stellate, all abundantly to densely appressed-stellate

on upper half, glabrous on lower half within, marginally and apically ciliolate to ciliate; petals 5, white, oblong to oblong-obovate, 9–11 mm. long, 5–7 mm. wide, stamens 100–200, filament 3.5–4.5 mm. long, anther 1.5 mm. long; ovary 5-locular, globose, 5-sulcate, glabrous, styles 5, 1 mm. long, stigmas simple. Berries not known.

*Distribution:* Ecuador (Provincia Esmeraldas), river bank, alt. 95 m., flowering in December.

*Specimens examined.* Ecuador, Esmeraldas; Parroquia de Concepción, below Playa Rica, *Mexia 8488* (F, NY, S, U, UC, US-holotype).

4. ***Saurauia chaparensis*** Soejarto *sp. nov.*

Species foliis subtus abundanter stellatis, inflorescentiis laxis, floribus circiter 15 mm. latis, staminibus plus quam 100.—Holotypus: *Steinbach 8920* (GH).

Shrubs?: copiously pubescent. Branchlets moderately stout, terete, prominently scarred, abundantly strigose often with barbulate trichomes to glabrescent. Leaves crowded near tip of branchlets; blades obovate to oblong-obovate, blunt to very shortly acuminate at apex, cuneate at base, rarely oblique, serrulate with very fine serrulations along margins, 10–18 cm. long, 3–6 cm. wide, chartaceous, in dry state sooty above, olive-brown beneath, distinctly scabrous above and beneath, secondary veins 18–22 pairs, tertiary veins elevated, more prominent than lesser venation, sparingly clustered and strigillose along and between veins with pustulate epidermis above, abundantly stellate to rarely tufted along and between veins (often mixed with barbulate trichomes along major veins) beneath, villous-barbate at axils of secondary veins beneath; petioles 2–3 cm. long, 1.5–2 mm. in diameter, terete to half-terete, abundantly tuberculate to strigillose with often barbulate trichomes, scabrous.

Inflorescences crowded near tip of branchlets, straight, somewhat loose, 30–80-flowered, 12–20 cm. long, 5–12 cm. wide, densely pulverulent-tuberculate, primary peduncle 5–10 cm. long, bracts linear, to 6 mm. long, very rarely foliaceous, to 25 mm. long. Flowers ca. 15 mm. broad, buds to 6 mm. long, very rarely foliaceous, to 25 mm. long. Flowers ca. 15 mm. broad, buds to 6 mm. in diameter, pedicels 5–15(–20) mm. long, bracteoles triangular, to 2 mm. long; sepals 5, outer 2 oblong-obovate, acute, 3.5–4.5 mm. long, 3–3.5 mm. wide, densely strigillose (trichomes with barbules), imbricate one suborbicular, rounded, 4–5 mm. long, 3.5–4 mm. wide, densely strigillose on outer half (trichomes with barbules), completely glabrous on inner half, inner 2 suborbicular to orbicular-oblong, 4–5 mm. long, 3.5–4.5 mm. wide, medially densely strigillose (trichomes with barbules), laterally completely glabrous, all completely glabrous within, marginally subentire, apically irregularly ciliolate; petals 5, oblong to oblong-obovate, rounded to truncate and often incised, 7–9 mm. long, 5–7.5 mm. wide; stamens 100–150, filament 2–3 mm. long, anther 1–2 mm. long; ovary 5–7-locular, globose, 5–7-sulcate, glabrous, styles 5–7, obsolete to 4 mm. long, stigmas simple to capitate. Berries 5–7-locular, globose, to 5 mm. in diameter (immature), 5–7-sulcate.

*Distribution:* Bolivia (Departamento Cochabamba), forest, alt. 2200–2400 m., flowering in January and March.

*Specimens examined.* Bolivia, Cochabamba: Chapare, Incachaca, *Steinbach 8920* (F, GH-holotype, NY, S); *ibid.*, *Steinbach 9513* (F, G, GH, K, NY, S).